PHOTONIC SCIENCE

Nightfall-LT

Low-SWaP (Size, Weight and Power) sCMOS Camera



From daylight to starlight... 24-hour operation ruggedised camera

The camera uses selected sub electron sCMOS sensors available as either monochrome or colour, with low dark current and low defective pixel count.

Thanks to efficient cooling and stable offset, the sCMOS camera allows reproducible acquisition for precise metrology measurements in the NIR spectrum.

Camera Link and HD-SDI interfaces enable easy integration into existing systems. sCMOS sensors with UV extension are also available on demand.

OEM versions with special form factors / cooling options are made to order for special programmes into specific payload and surveillance systems.

Key Features

- >90 dB intra-scene dynamic range
- Read out noise
  <1 electron RMS
- 30/60 fps
  with HD full resolution
- Excellent linearity
  response to varying intensities and / or exposures
- HD-SDI & Camera Link interface
- Software option:
  SDK kit, Labview VI's
- HD format 1920 x 1080

Applications

Available with passive cooling

Auto control exposure for surveillance

Region of interest allowing digital zooming

Pixel binning for improved sensitivity

Colour or multi spectral filters

Available with active cooling

Astronomy

Hyper spectral imaging

Payload

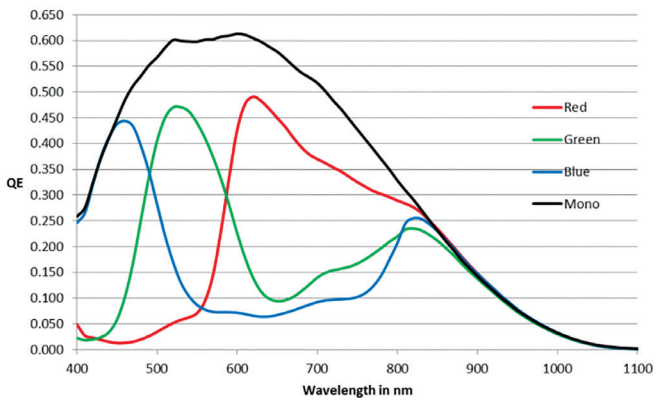
Spectroscopy

Specialist Camera Solutions Industrial | Surveillance | Scientific

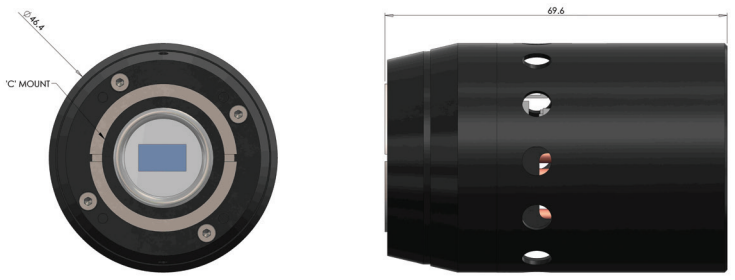
PRECISOMETER
Official representative of Photonic Science
info@precisometer.com
precisometer.com/photonic-science

Nightfall-LT sCMOS Camera

Characteristics	Nightfall-LT
Spectral Range	380 - 1100 nm
Resolution (pixels)	1920 x 1080
Sensor Size	9.6 mm x 5.4 mm
Frame Rate	30 fps at 16-bit digitization 60 fps at 12-bit digitization
Pitch	5µm
Full Well Capacity	22,000 - 25,000 electrons
Read Out Noise	<1 electron
Reading Mode	Integrate While Read / Rolling Shutter
Dark Current	<25 electron/pixel/second at 20°C
Sensor Temperature (°C)	-40°C - 80°C with air cooling
Corrections	Non uniformity, bright pixel, gain, offset, flatfield
ADC	12-bit with 16-bit digital processing
Exposure	15 microseconds up to > 1 minute
QE 0.9µm	15%
Power Draw	at 12V the current is 685 mA maximum (with Peltier cooling)
Weight	600 g
Dimensions (mm)	69.6 x 46.4 diameter



Quantum efficiency response of cooled Nightfall-LT camera



Nightfall-LT dimensions

T +44 (0)1424 444883
E info@photonicscience.com
www.photonicscience.com

22 Theaklen Drive, Saint Leonards-on-sea, TN38 9AZ, UK
Part of Tibidabo Scientific Industries
PS-DS008-Nightfall-LT-Rev02-Apr2026

PRECISOMETER
Official representative of Photonic Science
Product selection, configuration & integration support

Office & enquiries
Precisometer B.V.
Eisingastraat 9
2201 DJ Noordwijk, Netherlands

Talk to Precisometer
info@precisometer.com
precisometer.com/photonic-science

Explore products & discuss your experiment